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Final Student Research Report

Reorganization of the Communication Battalion

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Thesis: The United States Marine Corps Communication Battalion is inadequate to meet the command, control, communication, computer, intelligence, and interoperability needs of the Marine Corps of the future. This paper examines several options to better organize the communication battalion to support Marine Corps missions.

USMC; Command and Control; C2; C3; C4I;
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REORGANIZATION OF THE COMMUNICATION BATTALION

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REORGANIZATION OF THE COMMUNICATION BATTALION

Outline

Thesis: The communication battalion is inadequate to meet the command, control, communication, computer, intelligence, and interoperability needs of the Marine Corps of the future. We have examined several options to better organize the communication battalion and offer a 3+ option as the best means to adequately yet economically address these needs.

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REORGANIZATION OF THE COMMUNICATION BATTALION

Recent events directly affecting the Marine Corps have led many Marines to believe that the communication battalion is inadequate to meet the command, control, communications, computer, intelligence, and interoperability (C4I2) needs of the Marine Corps of the future. The two most significant events were the Gulf War and the subsequent focus on the Marine Expeditionary Force (MEF) as a warfighter operating in a joint environment.

During the Gulf War, the Marines once again proved their worth by their contributions to the successful campaign. However, that success was facilitated by the long buildup period that allowed many units, including the communication battalion, time to adjust and react to often unfamiliar taskings. The Marine Corps deployment to Southwest Asia (SWA) was huge: one MEF command element, two Marine Divisions, two Force Service Support Groups, the equivalent of two Marine Air Wings, and two Marine Expeditionary Brigades (MEB) afloat in the Persian Gulf. This was the largest deployment of Marines since Vietnam and also the largest operation requiring us to operate in a joint/combined environment. The situation severely stretched the capabilities of the communication battalion which had neither trained nor been organized to support so large a force with multiple command posts dispersed over extended distances. In order to adequately support this deployment, the Marine Corps employed almost all of its

long-haul, high-capacity communications gear and relied on borrowed gear from other services to fill the remaining deficiencies. Without this augmentation in both equipment and personnel, the Marine Corps' success may have been greatly diminished.

Additionally, recent operations such as Just Cause, Provide Refuge, Sea Angel, JTF Gitmo and Desert Shield/Storm have had a true joint flavor and seem indicative of future operations. The Department of Defense has reinforced this joint focus in JCS Pub-1 and the National Military Strategy for 1992. The Marine Corps itself has reflected this idea as well in its draft of FMFM-2. Consequently, the Marine Corps of the future will need to be capable of operating in a joint and/or combined environment. C4I2 has specifically been targeted by both General Gray and General Mundy as an area needing improvement in order to adequately meet Marine Corps and joint requirements of the future. Thus, recent force structure groups were directed to focus specifically on C4I2 and the Marine Corps' capability to effectively support a component command (MARFOR) and a Joint Task Force Commander (JTF) in addition to providing support to the traditional MEF.

At the same time, the Marine Corps is facing an opposing trend of a declining budget and drastic personnel cuts. Congressionally mandated force reductions will have a substantial effect on the Marine Corps as a whole. This fact alone has driven the Marine Corps to re-evaluate missions and organizations of Marine Corps

units. In order to evaluate possible reductions and to address the concerns of Generals Gray and Mundy, the Force Structure Planning Group met and proposed a new task organization for the communication battalion. This group's proposal will be discussed in this paper in greater detail along with other alternatives.

It is clear that several factors and events have targeted the communication battalions as likely candidates for reorganization. Our intent is to examine the specific problems and deficiencies with the current mission and organization. These areas were brought to our attention through several interviews with key communicators, a questionnaire to FMF communication units, and various after-action reports. In addition to highlighting these problems we also sought solutions. We examined the Force Structure Planning Group's proposal, the U.S. Army's communication organization, and the unexploited capabilities of the reserve communication battalion. Our focus was the communication battalion, itself, and not its relationship to the G-6 and the Surveillance Reconnaissance and Intelligence Group (SRIG). Additionally, our discussion is limited to the Major Subordinate Command (MSC) level and above with regards to communication requirements. We were influenced significantly by the anticipated budget and force reductions. Therefore, our solution is to dust off the unexploited capabilities and equipment of the reserve communication battalion and to propose equipment allowances that are economic yet adequate to fulfill MAGTF requirements of the

future.

PROBLEMS WITH THE COMMUNICATION BATTALION

Current Mission Statement

Many communicators on the Force Structure Planning Group and several communicators responding to our questionnaire have indicated that the current mission statement of the communication battalion is insufficient. Specifically, the communication battalion has not kept pace with the growing requirements to support the Marine Corps in a joint arena and the MEF as a warfighter.

The current mission statement of all Marine communication battalions, including the reserve battalion, is as follows:

Provide communication support to a MEF Command Element, a MEF and MEB command element, or two MEB command elements, simultaneously deployed. It is, additionally, tasked with providing multichannel radio or wire links between a MEB or MEF command element and Major Subordinate Commands. (37:5-1)

When the communication battalion's mission was reviewed by the force structure study of 1983, the intent was for the battalion to

provide communications for a MAGTF consisting of a notional "one of everything MEF" deployed within a limiting force beachhead line (FBHL).(2) Even in the years prior to Desert Shield, it was recognized that a single communication battalion was inadequate to provide the doctrinal communications support required by its mission statement.(23, 25) At best, the communication battalion could provide support for one notional MEF or one MEB but found it impossible to support both a notional MEB and MEF employed simultaneously. Therefore, it should have come as no surprise when 9th Communication Battalion (Comm Bn) required reinforcement to satisfy the extended communication requirements of a "two of everything MEF" during the Southwest Asia (SWA) deployment. Not only was 9th Comm Bn (with augmentation) supporting twice the notional MSC's, but was concurrently supporting the component commander (MARFOR) and 5th MEB operations afloat.

With the demise of the MEB, a more adequate mission statement would indicate the battalion's ability to support a MEF-size command element with multiple command posts operating in a joint operation. SWA also re-emphasized the need to consider the role of a component command and its communication requirements. In FMFM-2 the Marine Corps proposes that FMFPAC, FMFLANT, and FMFEUR be designated as component commands for their respective areas of responsibility. The general consensus is that the communication battalion should provide the communication support to these component commands if they are activated. Additionally, the MAGTF

commander may be required to fill the role of JTF Commander, possibly incurring communication requirements not filled by the Joint Communication Support Element (JCSE). Concurrent with these concerns is the requirement for liaison teams external to the MAGTF. The current mission statement also makes no mention of the reoccurring requirement for the communication battalion to provide personnel and equipment to support Marine Expeditionary Units (MEU).

Current Table of Organization

Just as the mission statement has not kept pace, the communication battalions' organization has not kept pace with the changing C4I2 needs of the Marine Corps. Also, it is unlikely that its current size and structure will support a more joint-oriented Marine Corps, for the same reason it cannot support its current mission.

In terms of personnel, the current communication battalion is authorized 39 officers and 839 enlisted Marines. It is divided into four companies: a headquarters company, two letter companies, and a support company. The letter companies provide single channel radio support, and the support company provides the long-haul, switched backbone support. Presently, all four Marine communication battalions are similarly organized, with some minor variations. For example, 7th Comm Bn has one reinforced

communications company operating independently in support of 1st MEB, and 6th Comm Bn (USMCR) is organized under the old 7900 series table of organization (T/O). (28, 29)

Several pre-Desert Storm after-action reports and observations from Marine communicators indicate that the organization is inadequate to fulfill its taskings during even routine exercises. Subsequently, it was found that the largest MAGTF deployment since Vietnam could not be supported by a single battalion without major reinforcements. Even during the Vietnam War, two communication battalions (5th and 7th) were required to support III MAF, a much more static force than the MAGTF deployed to SWA. Eventually, elements of every communication battalion in the Marine Corps were required to provide some of the support demanded by I MEF in SWA. The support also included JCSE assets which provided the connectivity from I MEF to CENTCOM, SHF multichannel (TRC-170) from the Army and the Air Force, message switching from the Army, and even digital telephone switching from the North Carolina Air National Guard.

Another requirement which is not specifically addressed in the current organization is the need for communication liaison teams. The current battalions are not manned or equipped to fulfill this important requirement but are often tasked to do so. In a joint or combined operation, liaison billets are often critical to the resolution of interoperability conflicts. Our research

indicated that the communication battalion is the natural choice to fill this responsibility.

Current Table of Equipment

The equipment organic to the communication battalion was stretched beyond its limits during operations in SWA and has often been deemed inadequate in past exercises.(23) Compared to the Army and the Air Force, the Marine Corps has been particularly slow in shifting from analog to digital technology. The communication battalions have been particularly deficient in digital switching and communications switched backbone equipment. The fielding of some digital equipment during SWA (AN/TTC-42) helped but did not alleviate this deficiency. Nearly every after-action report and lessons learned, and several interviews highlight the following problems with currently fielded and soon-to-be-fielded equipment.

AN/TRC-170. The scheduled fielding of the AN/TRC-170 (V)3 beginning in 1993 will only partially fill the void in digital SHF terrestrial multichannel equipment. Based on the SWA experience, this version of the TRC-170 with its notional 100-mile range will limit the communication battalion's capability to provide backbone multichannel services over extended distances. Additionally, at its maximum range the data rate capability of the (V)3 is greatly reduced.(18:247) Research indicates that the requirements could be better met by purchasing the AN/TRC-170 (V)2 (150-mile version)

which was purchased by the Army and the Air Force.(20) In addition to identifying the need to increase the TRC-170's data rate over extended ranges, the Force Structure Planning Group did not think the number of terrestrial sets was adequate to fulfill anticipated commitments. The group proposed the need for 4 additional sets each for 8th and 9th Comm Bn's, with all of these sets being (V)2.

Digital Message Switches. Research revealed almost unanimous recommendation that the Marine Corps purchase a digital message switch along the order of the AN/TYC-39.(23) Operations of the past and SWA have indicated that the currently fielded MSC-63A, capable of 4 mode 1 circuits, does not provide sufficient volume or speed of service to meet the needs of a MEF.(25) The greater capacity (25 or 50 circuits) and flexibility of the TYC-39 used by the other services amplifies the deficiencies of the MSC-63A.

Large Capacity Digital Telephone Switches. Although the Marine Corps fielded the AN/TTC-42 during operations in SWA, it was still necessary to rely upon a AN/TTC-39 from the North Carolina Air National Guard to provide a much-needed expansion in telephone subscriber and trunk capacity and capability. Many respondents to our questionnaire, as well as many after-action comments, identified the Marine Corps' mistake in not purchasing a large capacity digital switch such as the TTC-39. Partially, as a result of this criticism, a software-expanded version of the TTC-42 will provide an expanded capacity from 150 to 280 circuits.(20)

Although this modification will allow the addition of several more trunk groups, it does not address the limited number of telephone loops that can be physically connected to the TTC-42. We believe this lack of a large digital telephone switch is a severe limitation for a MEF-sized force.

Mobile Subscriber Equipment. Problems with interfacing the Marine Corps' telephone and message switching with the Army's Mobile Subscriber Equipment (MSE) system were also highlighted by several sources.(9, 23) The Army has fielded both TRITAC and MSE systems. Therefore, in order to more efficiently operate with the Army in a joint environment, the Marine Corps will need to procure the MSE system or an appropriate telephone/message switching interface device such as GTE's Contingency Communications Package. It has also been suggested that the Army develop an interface gateway to achieve interoperability with the Marine Corps.

Ground Mobile Forces Satellite Equipment. The vast distances between many command elements in SWA led to an extensive employment of Ground Mobile Forces (GMF) equipment.(9, 21) Our research indicated that the communication community values the capability of this system and that additional systems are needed to satisfy the requirements of the future.(3, 9, 21) Currently the Marine Corps owns four complete suites of GMF equipment, one suite at each communication battalion (although 6th Comm Bn has yet to take possession of this asset) and one TSC-85 in pre-positioned war

reserves (PWR).

Training

The Marine Corps Reserve communication battalion training requires some attention from active duty communicators. In the past, training of 6th Comm Bn has been loosely supervised by 4th MARDIV. Under this supervision 6th Comm Bn has been allowed to fall far behind the active duty battalions in terms of equipment and training.(12) Budget cuts will hopefully direct more attention to this vital asset and its contribution to the "Total Force Concept." If not, the lack of training and utilization will only serve to hinder the capabilities of the communication community.

We consider the training of active duty communication battalions to be adequate despite the lack of full MEF-size exercises in the field. Past training has, for the most part, concentrated on support of a MEB, due to the lack of training opportunities with a full MEF. We believe the future focus on the MEF as a warfighter will provide the communication battalions with an unprecedented opportunity to concentrate on supporting the component and MEF command elements as they begin to take to the field as described in FMFM-2 (Draft). Additional emphasis on liaison teams should provide many opportunities to send communication detachments to train with joint and combined forces world-wide.

DISCUSSION OF PROPOSALS

Having identified a myriad of problems that have marked the current mission and organization of the communication battalion as inadequate, the rest of our discussion will focus on several possible proposals to solve or at least lessen these problems. We will conclude by offering a proposal which we feel addresses these problems with on-hand resources and in the most efficient manner.

Current Organization

Although not a very popular option in light of the previously discussed problems, staying with the current organization of the communication battalion is a possibility. There are some inherent benefits to this option. A plan that involves no increase in personnel and equipment would certainly appeal to the current focus on budget and force reductions. Additionally, the current organization has developed an unprecedented familiarity with its capabilities and limitations based on the SWA experience. This familiarity is important when units need to deploy and employ expeditiously to meet an operational requirement. The data and experiences of SWA alone serve as a foundation for a full-blown MEF-size force in a joint environment. The current organization would readily know how to fulfill these requirements and would be able to identify and request the much needed augmentation.

Although not a strong course of action, settling for the status quo is a viable alternative.

The Force Structure Planning Group's 2+ Proposal

In the fall of 1991 a new structure for the communication battalion was designed by the Commandant's directed Force Structure Planning Group. (Appendix A) The resulting organization proposal for the communication battalion, which was known as the 2+ proposal, narrowed the Marine Corps to two primary communication battalions of 58 officers and 1209 enlisted Marines (notionally 8th and 9th Comm Bn's). (Figure 1)

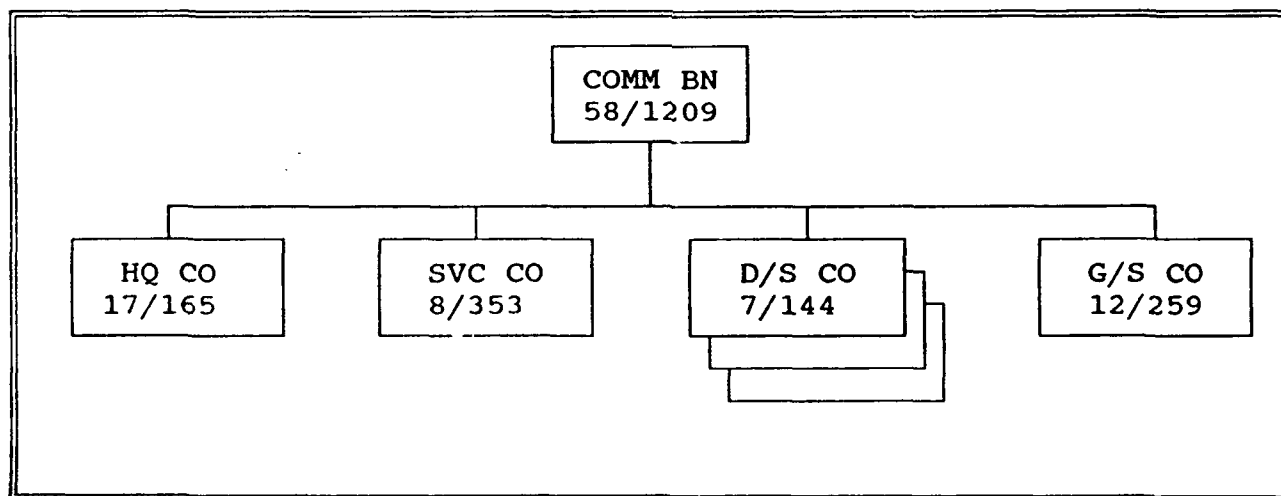


Figure 1. Planning Group "2+" Solution; 8th and 9th Comm Battalions

One other smaller battalion of 37 officers and 657 enlisted (notionally 7th Comm Bn) will be formed to maintain a communications capability in Okinawa. (Figure 2)

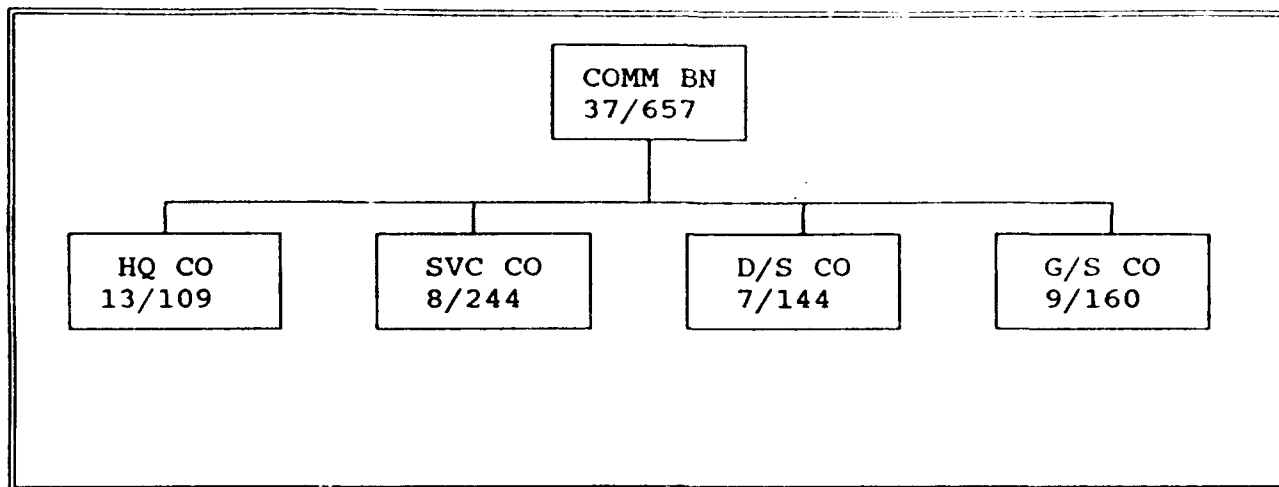


Figure 2. Planning Group "2+" Solution; 7th Comm Battalion

This plan will fulfill the Commandant's intent to improve our C4I2 capability, and it is an extremely viable option should the Marine Corps remain above 159,000. However, we feel that the plan will meet resistance, in an era of reduction for the following reasons:

1. It is too expensive in terms of personnel. This plan, in manning 3 battalions, requires a total of 153 officers and 3075 enlisted Marines (excluding 6th Comm Bn) compared to today's 129 officers and 2520 enlisted. (Appendix A)
 2. It is too expensive in terms of equipment. Purchase of the required equipment will cost 118 million dollars. (8)
- Although C4I2 has been identified as a problem area, it is unlikely that this expense will go unchallenged by other functional areas that are being forced to reduce. This increased funding may not even be available once all the

requirements are laid on the table.(Appendix A)

3. The plan does not use the assets available under the "Total Force" concept (i.e. 6th Comm Bn).(8) The additional expense for equipment and personnel could be significantly less if the personnel and equipment of the Reserves were utilized.

4. The 2+ plan identifies the need for one MEU support platoon of 30 Marines. Based on our group's experience, we feel that this number is still inadequate to support the ongoing missions which include workups and deployment cycles.

5. The 2+ plan proposes a AN/TRC-170 team size of 3 operators. Both Army and Marine communicators in our research group feel that the TRC-170 workload is beyond the capability of a two-man team. Based on our communications experience, we recommend a minimum of 4 personnel per team (assuming a 24-hour-a-day operation). We view the purchase of 8 additional TRC-170's as unnecessary in light of the 8 TRC-170's programmed to support 6th Comm Bn, which apparently were not considered as available assets.(20)

Army Signal Brigade Organization

When searching for ways to improve an organization's

capabilities, it is natural to look for similar organizations and determine if their structure and functioning would serve as a viable model. During our research the U.S. Army's signal brigade was suggested as a model worthy of examination, but we found that the Marine Corps does not have the personnel and equipment necessary to emulate this organization.

The Army signal brigade's area of responsibility encompasses an area almost twice the size of the state of New Jersey, approximately a 140 by 250 km. The brigade's organization is comprised of three battalions and a total of 15 companies including the headquarters and headquarters companies. The signal brigade has the responsibility to provide communications to designated units throughout its boundaries. Boundaries usually include 5 divisions and an additional 120,000 non-divisional troops. The typical corps signal brigade is comprised of a headquarters and headquarters company, corps command operations battalion, a corps radio battalion, three area signal battalions, and a cable/wire company.

The units in the brigade perform either a functional mission or a geographical area mission. Communication units assigned a functional mission will provide support to a designated element. Communication units that are assigned a geographical mission provide communications support to units that fall within a designated geographic area. Within the signal brigade the command operations battalion and the radio battalion perform a functional

mission. The area signal battalions perform the geographic area missions. The signal brigade is organized so that one area signal battalion supports 2 and 2/3 divisions. Four area signal battalions may be assigned to a Corps Signal Brigade.(32, 33, 34)

The obvious differences between the Marine and Army signal organizations are in the size of the organization, equipment, and the mission. The Marine communication battalion as previously mentioned is comprised of only 3 companies and a headquarters element, and often, due to the size of the MEF and its area of responsibility, the battalion has to be augmented with additional equipment. Although the missions of the Army and the Marine Corps communication units are different, the intent of the two organizations is basically similar: to provide direct/functional and general/geographic support to the best of its capabilities. However, it is unlikely, that the Marine Corps will be able to increase its equipment or personnel to be as adaptable to the needs of the MAGTF in a strictly functional and geographic manner, when even the Army is facing severe reductions in force. Therefore, we determined that this option was unsuitable at this time.

OUR 3+ PROPOSAL

In the course of examining and rejecting different options, we were able to develop our own proposal for a reorganization of the communication battalion. We have labeled our proposal the 3+ plan

because it encompasses the 3 active duty communication battalions already in existence and recommends changes in the mission statement, in the organization of personnel and equipment, and in training conducted. This plus (+) portion of the proposal, specifically, offers the use of an under-utilized resource, the reserve communication battalion, as a means to economically resolve the shortcomings of the regular communication battalions.

Revised Mission Statement

In order to address the deficiencies addressed earlier, we recommend the mission statement of the communication battalion be changed to the following:

Provide communications support for the MAGTF rear, main, and forward command posts, and the Marine component commander if deployed. Provide backbone transmission systems between the MAGTF command elements and the command element of one Marine Division, Force Service Support Group, and Marine Aircraft Wing. Be prepared to receive or provide augmentation as required. With augmentation/reinforcement, provide communication services for a Marine component commander functioning as JTF commander. Provide communication support for MAGTF-level liaison teams.

Revised Organization

We concur with the Force Structure Planning Group that 8th and 9th Comm Bn's should have the capability to provide service to a MARFOR commander, a robust MEF rear command post, a main command post, and an austere forward or jump command post. We propose the following changes to the organization of the communication battalion: (Figures 3 and 4)

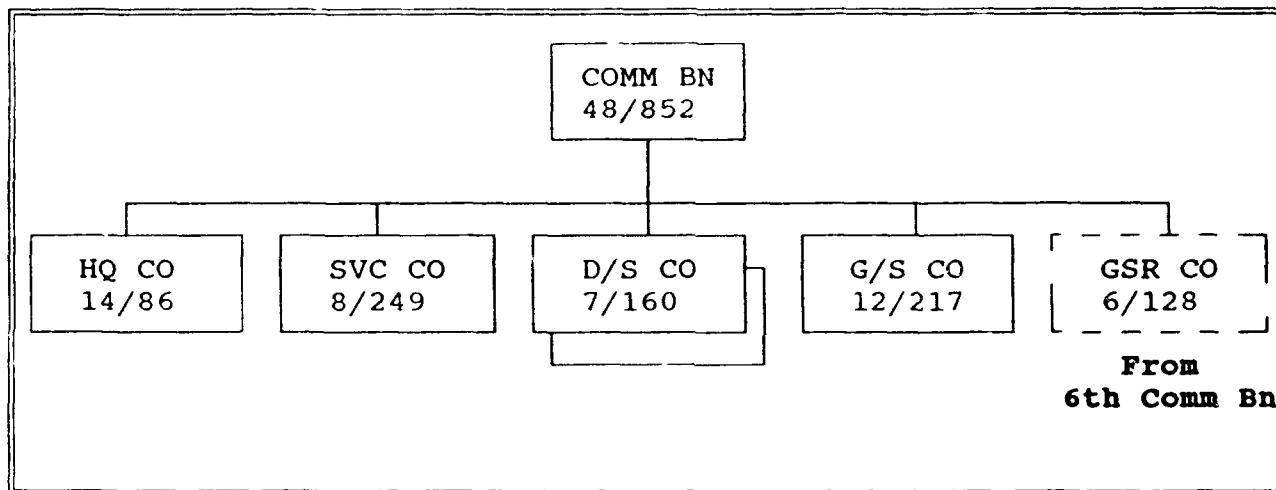


Figure 3. "3+" Plan; 8th and 9th Comm Battalions

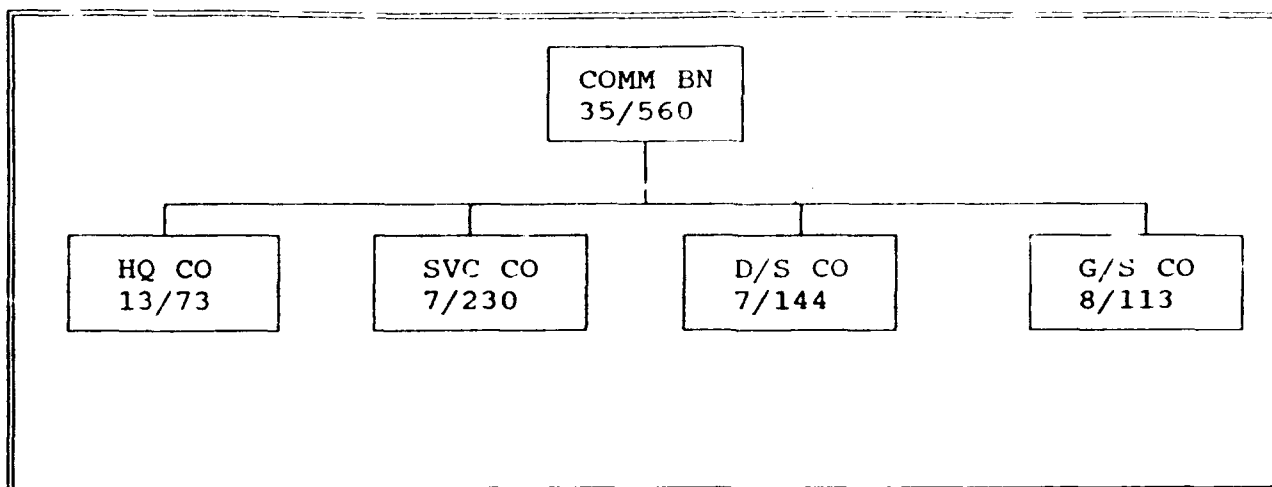


Figure 4. "3+" Plan; 7th Comm Battalion

1. That the communication battalions be built around two similar direct support communication companies designed to support either the MEF rear or main command post with augmentation from the remaining elements of the battalion. (Appendix B)
2. That these companies should have the capability to provide mid-level liaison teams consisting of AN/PSC-3, AN/MRC-138, AN/MRC-110 and various terminal devices (DSVT, microcomputer, FAX, packet radio modem).
3. That a third direct support company from 6th Comm Bn be provided as a "round out" company to support the MARFOR commander and provide liaison teams. This third company would be smaller than the other two companies since this commander would not require AN/MRC-142 UHF multichannel equipment.

4. That a headquarters company, a general support company, and a service company similar to the 2+ proposal (although smaller in size and scope) would round out these battalions.

5. That the MEU communication platoons would fall under the T/O of the MEU command element. We believe this would improve training and continuity of communications within the MEU.

6. That the proposed battalions have a total communication organization of 140 officers and 2484 enlisted. The total Marine T/O for each full battalion would be approximately 50 officers and 850 enlisted. (Figure 5)

ACTIVE DUTY TOTALS

** 6TH COMM BATTALION: 9 / 240

** 7TH COMM BATTALION: 35 / 540

** 8TH COMM BATTALION: 48 / 852

** 9TH COMM BATTALION: 48 / 852

GRAND TOTAL: 140 / 2484

Figure 5. "3+" Plan; Sum of Required Active Duty Personnel

7. That 7th Comm Bn be organized similar to the 2+ proposal (although we, again, recommend elimination of the MEU support platoon), for a battalion total of approximately 35 officers and 540 enlisted. Additionally, since this battalion would

essentially be supporting a MEF forward-size command element, its assets (particularly GMF) would be available to reinforce other battalions as required.

Reserves

In keeping with General Powell's description of the force of the 1990's as, "... a carefully tailored combination of our active and reserve components," our 3+ proposal aims at capitalizing on the Marine Corps reserve. This proposal differs from all other proposals in that it incorporates what we believe are the vastly under-utilized assets within 6th Comm Bn. Located in the New York Metropolitan area, 6th Comm Bn is essentially equipped with single channel radios and small capacity switchboards.(12) Although the Marine Corps has funded purchases of critical low density (CLD) and other equipment for the reserves in quantities similar to the active duty communication battalions, the reserve establishment has not taken possession of existing equipment and in our opinion are not prepared to take possession of future equipment.

We believe that by following the successful example of the North Carolina Air National Guard, the active duty Marine Corps can turn a small investment in personnel into a real communications capability.(27) In order to gain this benefit, we recommend the Marine Corps take the following steps:(Appendix B)

1. Split the battalion into a headquarters company, a liaison company, and two detachments: one on the east coast (Raleigh area) to support 8th Comm Bn and one on the west coast (San Diego area) to support 9th Comm Bn. This will allow spread loading technical MOS's in areas that can provide better support. (36) (Figure 6)

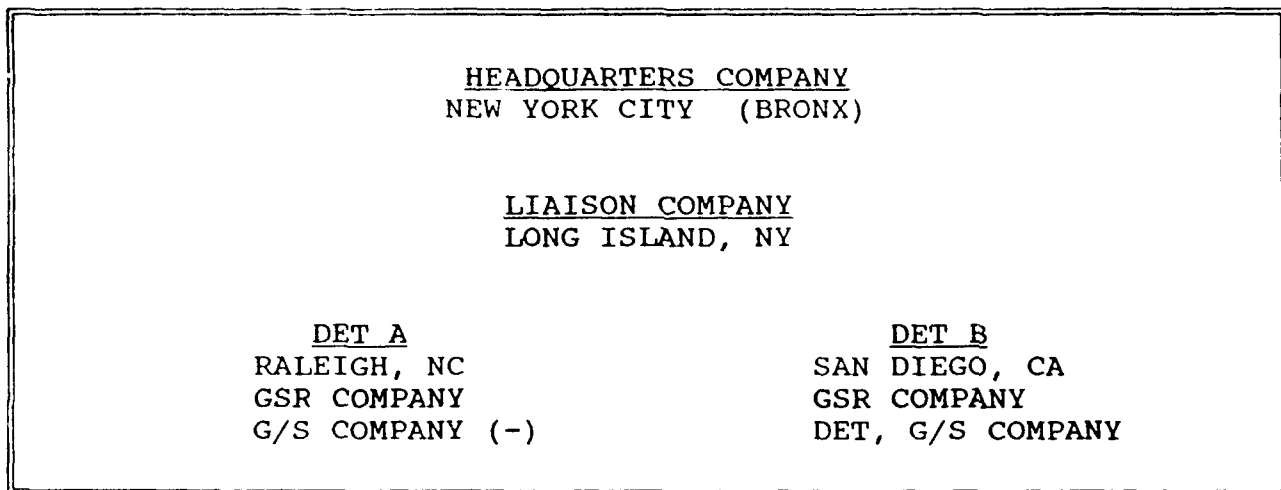


Figure 6. "3+" Plan; 6th Comm Battalion Organization

2. Increase active duty communicators supporting the reserves to 10 officers and 240 enlisted in order to allow a more rapid deployment of CLD equipment on short notice for contingencies and to ensure long-term exercising of this equipment. The reserve communicators will round out the teams during drill periods as part of annual training and upon activation.

3. Integrate active duty communicators into the T/O of the unit similar to the way MWCS-48 integrated active duty personnel. (30)

4. Force the reserve establishment to field CLD equipment that is currently existing or programmed for purchase.

5. Increase active duty communication battalion supervision of reserve training.

The following factors are possible rationale for this under-utilization of the reserve communication battalion and are based on our group's experience working with 6th Comm Bn.

1. The location of 6th Comm Bn within the New York city area has not attracted the technical expertise necessary to field and maintain CLD equipment according to 1st Marine Corps District Recruiting Data.

2. The Inspector-Instructor T/O's have not stayed current with equipment fielding.(29)

3. The Marine Corps has failed to demand that the reserves provide a real capability to the "Total Force". Although 6th Comm Bn did support SWA, it did so in a piecemeal fashion, providing primarily personnel with limited technical depth and no CLD equipment.

4. The reserve establishment has a tendency to stay with

familiar equipment rather than risk accepting unfamiliar equipment.

Equipment Requirements

In addition to utilizing the reserves, our 3+ proposal offers the following communication equipment recommendations:

AN/TRC-170. We concur with the proposal that the Marine Corps should purchase AN/TRC-170's in a (V)2/(V)3 mix of 50 percent (V)2 and 50 percent (V)3. The Marine Corps is attempting to obtain a (V)2/(V)3 mix by requesting 8 (V)2 systems in the 1994 POM.(20) However, it is doubtful that these additional systems will become reality, due to budget cuts and the relatively low position this gear has on the POM.(20) We, therefore, recommend an attempt to modify the current buy programs to reflect this 50/50 mix (including the reserves) and recommend cancellation of plans to purchase the 8 additional AN/TRC-170's in the 1994 POM. The deficiencies should be filled by employing 6th Comm Bn's under-utilized and already allocated equipment.

Ground Mobile Forces Satellite Equipment. No additional GMF sets have been programmed in the 1994 POM.(20) We recommend that the Marine Corps not pursue the purchase of any additional sets. As with other CLD equipment already purchased for 6th Comm, we recommend that 6th Comm Bn's GMF suite be fielded and exercised to

fill deficiencies during operations. Additional capability can be provided by the remaining TSC-85 from PWR to meet surge capacity requirements.

Digital Telephone Switch. Because of the inherent limitations of the AN/TTC-42 and our belief that it is not possible to adequately upgrade the AN/TTC-42, we recommend the purchase of one AN/TTC-39 (or similar capability switch) each for 8th and 9th Comm Bn.

Analog Telephone Switch. The continued worldwide use of analog telephone systems will require that we continue to maintain the AN/TTC-38 in our inventory. It may be feasible to place these switchboards in PWR if personnel manning requirements within the communication battalion cannot support their continued fielding.

Digital Message Switch. We do not concur with the decision of the planning group to purchase a message switch that has the capabilities of the AN/TTC-39. Instead, we recommend that the Marine Corps Systems Command aggressively pursue an upgrade for a downsized AN/MS-63A which will increase its capacity to 8 mode 1 AUTODIN circuits.(20) Furthermore, we recommend the Marine Corps aggressively pursue National Security Agency (NSA) certification for the MS-63A to allow simultaneous processing of general service (GENSER) and special intelligence (SI) messages.

We believe that by incorporating all the steps outlined in our 3+ proposal we can offset the anticipated decline in communication personnel and dollars. The use of reserve equipment will provide the additional benefit of making more equipment available to active forces without the expense of unprogrammed purchases. By following our 3+ proposal, the Marine Corps will receive the benefit of four communication battalions from a cost in personnel that today buys only three. Furthermore, we believe that the possibility of obtaining the TTC-39 and MSE interface equipment from the drawdown of our sister services may allow the Marine Corps to obtain increased capability at a bargain basement price.

If force reductions further dictate that the Marine Corps organize into fewer than two MEF's, deploy smaller MAGTF's, or abandon the component commander concept, our communication organization could be further reduced. Additional cuts could be made by eliminating 7th Comm Bn and providing communication service for the WESTPAC MEF Forward on an as-required basis from 8th or 9th Comm Bn's. Clearly, the pending personnel and budget cuts present a challenge as great as any the Marine Corps has faced in recent history. But if we do our job and plan intelligently, the Marine Corps can receive superior communications at the lower cost demanded by Congress.

CONCLUSION

Our research has confirmed that the issue of reorganizing the communication battalion to better meet its anticipated mission is not an easy task. However, the importance of effective communications to the outcome of warfare has made this task a worthy challenge. Confronted with strong opposing trends of force reduction and the need to better accommodate a MAGTF in a joint and/or combined environment, we searched for compromise. Often by doing a little spring cleaning, we can find what we have been missing for so long. We found the reserve communication battalion and offer it along with a laundry list of equipment suggestions as a viable solution to better organizing the communication battalion to meet the future needs of the Marine Corps.

APPENDICES

- A. Force Structure Planning Group's 2+ Proposal
- B. Our 3+ Proposal

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